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TIRE PRIVITIZATION INITIATIVE (TPI) INDUSTRIAL BASE ANALYSIS

EXECUTIVE SUMMARY

As a result of the Base Realignment and Closure (BRAC) 2005 decision, the Defense Supply Center Columbus (DSCC) was responsible for implementing privatization of tires and tire-related equipment. DSCC awarded contracts to Michelin Aircraft Tire Company and Michelin North America, together referred to in this analysis as "Michelin" and including all other affiliated companies, such as BF Goodrich, on December 29th 2006 and January 25th 2007 respectively. Michelin is responsible for integrated support for all of the Defense Logistics Agency (DLA) land tires and tire-related equipment customers, including worldwide support through customer direct (CD) shipments.

The Industrial Capabilities Division (J-74) of Headquarters DLA tasked BearingPoint, Inc. and Los Alamos Technical Associates, Inc. (LATA) to assess the impact on the industrial base of the land and aircraft tire contracts awarded as a result of a BRAC 2005. J-74 identified 4 tasks to address concerns from Congress that the TPI acquisitions may have the effect of limiting competition and negatively impacting the U.S. industrial base for tires. The following paragraphs provide the team's response to each of the task areas:

Task 1 – Provide analysis that determines if the domestic industry is viable without DoD demand: U.S. commercial demand for tires remains strong and much larger in proportion than DoD demand, especially for military land tires. Although DoD would be considered one of the largest single customers for tire manufacturers, the loss of a major customer would be disappointing financially over the short term, but is not likely to cause a "tipping point", where the manufacturer will become insolvent or decide to shift domestic manufacturing overseas.

Task 2 – Determine if some of the tires on the TPI contract cannot be sourced domestically and determine the cause(s) for the tires lack of domestic sourcing. In accordance with the Buy American Act (BAA) and the Trade Agreements Act (TAA), Michelin is allowed to source tires from "designated or qualifying" countries. Although the TPI land tire population has 232 Type C[1] and over 2/3rd of the land tires are older Bias-ply tire construction, Michelin has only had to source 4 Bias-ply tires from non-TAA compliant. None of these tires meets the criteria as an "industrial base" tire. Although obsolescence is likely a factor in Michelin's outsourcing of Bias-ply tires to smaller manufacturers and overall sourcing challenges, the compelling factor is each tire's low Annual Demand Value (ADV).

Task 3a – Determine whether the 35% second source requirement in the TPI contract is sufficient to have the intended effect of maintaining an adequate industrial base. The 35% second source requirement appears to be more effective for aircraft tires than land tires; however, the process for identifying "industrial base" tires for both contracts should focus more on whether or not a tire is military unique as defined in FAR2.101 – Definitions, rather than "increasing or maintaining competition". Since military land tires fit well within the definition of "commercial items", sharing requirements may not be necessary to maintain competition in an industry that is already very competitive. Surge and

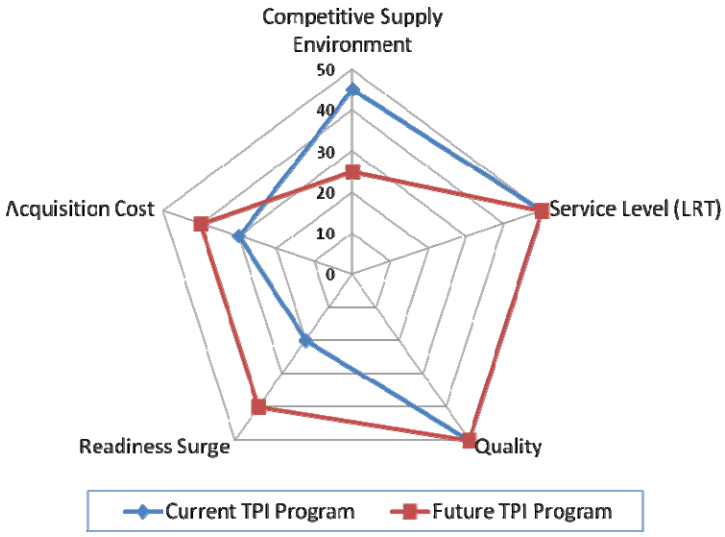
[1] Slow moving tires accounting for less than 5% of total annual demand value for DSCC's military land tires.

Sustainment Planning Requirements should also be developed and incorporated into both contracts using a standard DLA Surge and Sustainment clauses.

Task 3b –Determine whether the TPI acquisition is at risk of creating a sole source environment that places DoD at a disadvantage in future procurements. The Department of Defense is not at risk of creating a sole source environment for military tires as a result of the TPI contracts. The 35% second source requirement provides a "safety net" for maintaining an already healthy aircraft tire industry. However, DLA should consider strengthening the competitive environment by decreasing the contract lifecycle and re-competing the contract at the end of the base period and utilizing a standard DLA 5 year contract vehicle going forward.

Task 4 – Provide recommendations for what measures DLA should consider for maintaining the capability and capacity required for tires by the industrial base. To the extent possible within the confines of the current contracts with Michelin, DLA should adjust the overall acquisition objectives of the TPI program. In Figure 1, the team developed a notional radar diagram to qualitatively depict the relative value of various TPI acquisition objectives. The blue lines show the team's estimation of the relative value of each of the current TPI acquisition objectives, and the red lines show new focus areas on *reducing acquisition costs* and *improving readiness/surge* and a de-emphasis on *shaping the competitive environment*. The following are more specific recommendations:

Figure 1: TPI Acquisition Objective Radar Diagram



1. Develop Surge and Sustainment Planning Requirements (SSPR) for land and aircraft tires.
2. Request that Michelin submit a Capability Assessment Plan (CAP) on its internal capability to meet Surge and Sustainment Planning Requirements (SSPR) and request other sources of supply to do the same where more than one source has been identified. If a shortfall exists with regard to Michelin's capability, then request that Michelin source requirements from the other source(s) of supply to maintain a warm mobilization capability.
3. Re-compete both contracts at the end of the base year period.
4. Utilize FAR 2.101 definition for "commercial items" as the basis for making "industrial base" determinations on whether or not the tire is military unique. The criterion of "essential in maintaining the industrial base" should be viewed from only a "mobilization" perspective.

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SECTION ONE: INTRODUCTION, METHODOLOGY AND ASSUMPTIONS

This section provides a brief overview of the Tire Privatization Initiative (TPI), the study purpose and the methodology used to form conclusions and recommendations.

1.1 Background

As a result of a 2005 Base Realignment and Closure (BRAC), the Defense Supply Center Columbus (DSCC) assumed responsibility for implementing privatization of air and land tires and tire-related equipment. The privatization effort was intended to save the customer and DoD costs associated with procurement, storage, distribution, and disposal (aircraft tires only) by placing these requirements on a prime contractor, who will provide direct delivery of tires from its stock. The prime contractor must agree to deliver equal or better service for the following responsibilities previously conducted by the Government:

- Order Processing and Fulfillment
- Planning
- Quality Control
- Procurement/Purchasing
- Supplier Management
- Item Management
- Finance (Contractor owned inventory)
- Management of the Inventory
- Warehouse Management and Operation
- Transportation Management
- Packaging/Shipment Preparation
- Transportation (CONUS and OCONUS)
- U.S. and Foreign Customs Clearance
- Obsolescence Management
- Customer Support Services
- Data Management
- Environmental, Safety and Occupational Health (ESOH) matters relating to the above service

Michelin was awarded a similar contract on October 19th 2000 to provide support to the U.S. Navy for aircraft tires, which will soon be moved to the DSCC air contract. This acquisition was used as a basis for the DSCC contracts, including the contract language.

1.1.1 Aircraft Tire Privatization

For aircraft tires, DSCC awarded a Firm Fixed Price Contract (SPM7L10-07-D-7001) with a 5 year base period and 5 option year periods (total of a 10 year contract length) and yearly economic price adjustments to Michelin America Tire Company on Dec 29th, 2006. The estimated total award amount is $372,389,236.45. Under this contract Michelin has the responsibility for procurement, storage, and distribution of these tires. Michelin is also responsible for disposal of scrap tires for CONUS locations and pick-up of retreadable tires for CONUS and OCONUS locations. Under this contract, Michelin was given a 270-day transition period to reach full performance and customers began receiving all tires and tire-related products directly from Michelin by mid-October 2007. The following are additional responsibilities privatized under the TPI for aircraft tires:

- Casings/Carcasses
- Disposal of Unusable Casing/Carcasses
- Disposal of Consumable Tires (CONUS)

1.1.2 Land Tire Privatization

For land tires, DSCC awarded a Firm Fixed Price Contract (SPM7L10-07-D-7002) with a 5 year base period and 5 option year periods (total of a 10 year contract length) and yearly economic price adjustments to Michelin North America on Jan 25th, 2007. The estimated total award amount is $1,661,426,262.00. Under this contract, Michelin was given a 270-day transition period to reach full performance and customers began receiving all tires and tire-related products directly from Michelin by mid-November 2007.

1.2 Study Purpose

The purpose of this study is to provide analysis and recommendations to address concerns expressed by Congress regarding the Tire Privatization Initiative required as a result of the 2005 Base Realignment and Closure (BRAC) decision. These concerns are highlighted in the following Congressional reports:

On May 11th, 2007, the House Armed Services Committee (HASC) expressed concerns in Report 110-146 – H.R. 1585 FY 08 Defense Appropriations Act that "*the new program structure could reduce the incentive for the incumbent military tire provider to maximize competition in the production of military tires. The committee expects the Defense Logistics Agency, in managing contracts for supply and distribution of military tires, to ensure, to the maximum extent practicable, that all qualified mobilization base tire manufacturers have a fair and equal opportunity to compete.*"

On September 14th, 2007, The Senate Appropriations Committee (SAC) expressed concerns in Report 110-155 – H.R. 3222 FY 08 Defense Appropriations Act that "*the Department ensures that the tire market remains a fair and competitive marketplace*" and "*administer[s] these contracts in a manner that maintains the U.S. industrial base for military tire manufacturing and future innovation as well as to preserve competitive procurement for current and future requirements for the Department*". The HASC concurred with the Senate language regarding military tires on November 6th, 2007.

On December 6th, 2007, The House of Representatives expressed concerns in Conference Report 110-477 – H.R. 1585 FY 08 Defense Appropriations Act that "*the trend towards large single contracts for the procurement of services may undermine competition and result in unequal treatment of competing contractors*".

1.2.1 Scope of Analysis

The following are the tasks addressed under the scope of this analysis. Task 3 was split into parts (a) and (b) based on a status meeting that occurred on April 24th 2008 to determine whether the TPI acquisition is at risk of creating a sole source environment.

Task 1 – Provide analysis that determines if the domestic industry is viable without DoD demand

Task 2 – Determine if some of the tires on the TPI contract cannot be sourced domestically and determine the cause(s) for the tires lack of domestic sourcing

Task 3a – Determine whether the 35% second source requirement in the TPI contract is sufficient to have the intended effect of maintaining an adequate industrial base

Task 3b –Determine whether the TPI acquisition is at risk of creating a sole source environment that places DoD at a disadvantage in future procurements

Task 4 – Provide recommendations for what measures DLA should consider for maintaining the capability and capacity required for tires by the industrial base

An assessment of Michelin's performance under both contracts, including Michelin's current industrial base sharing status, is out of scope of this analysis.

1.3 Methodology

This section provides the methodology used to assess the relative risks to the Department of Defense that the contracts will limit competition and create a sole source situation for a number of tires. Since the study attempts to measure this risk, no single source or sources of data can provide a definitive or "black and white" response to each task, since the nature of the assessment is qualitative. BearingPoint Inc. and LATA have proposed reasonable responses and expressed them in terms of a level of risk (low-medium-high) to each task that is supported by the observations gleaned from multiple data sources.

Throughout this analysis, the team utilized an "ABC" inventory classification analysis where each tire's estimated Annual Demand Value (ADV) is calculated as a percentage of total ADV for all tires and in some cases for only land or air tires. Each tire is then placed into an inventory classification category or "bucket" as follows:

- Type "A" – Tire would account for >=80% of the total ADV for land or aircraft tires;
- Type "B" – Tire would account for the next 15% of the total ADV;
- Type "C" – Tire would account for the remaining 5% of the total ADV; and
- Type "D" – Tire has zero usage in the past 12 months

1.3.1 Task 1 & 2 Methodology

The team developed a single approach to provide responses for Task 1 (Provide analysis that determines if the domestic industry is viable without DoD demand) and Task 2 (Determine if some of the tires on the TPI contract cannot be sourced domestically and determine the cause(s) for the tires lack of domestic sourcing), since these two tasks are related.

1. Estimated the U.S. tire market size in total and by segment, DoD's relative market size, and the change from 2005 to 2006 to identify any trends by market segment.
2. Reviewed land tire types, e.g. over the road bus/truck, for type A (fast moving tires that account for 80% of land tire demand value) to estimate military land tire market size to the appropriate NAICS segment
3. Supplemented this analysis with industry insights from Michelin on sourcing issues related to obsolescence and market estimates for military aircraft.
4. Reviewed DSCC's "Determination and Findings Under the Trade Agreements Act (TAA)" which documents the procedures DSCC followed to confirm that no TAA-compliant sources existed for 4 low annual demand value tires.
5. Utilized production location data from the questionnaires provided by Michelin and Goodyear.

1.3.2 Task 3(a) and (b) Methodology

The team developed a more comprehensive approach to make determinations for Task 3a (Determine whether the 35% second source requirement in the TPI contract is sufficient to have the intended effect of maintaining an adequate industrial base) and Task 3b (Determine whether the TPI acquisition is at risk of creating a sole source environment that places DoD at a disadvantage in future procurements). This task more directly addresses the concerns from Congress.

1. Matched active part numbers and CAGE names to the entire TPI NSN population using DLIS data for approved part numbers for CAGEs that have provided each tire in the past and normalized CAGE names for entities Doing Business As (DBA) as a specific tire manufacturer. CAGE names and part numbers matching active tire manufacturers were segregated from other entities, e.g. OEMs, and queried to understand the competitive tire market.

2. Analyzed Defense Logistics Agency Operations Research and Resource Analysis (DORRA) requisition data for the previous year ending February, 2008 to determine the Annual Demand Value (ADV), develop an "ABC" inventory classification, and measure the standard deviation of daily demand to each tire's average daily demand. This analysis was performed to understand the relative value of each tire to total demand value for the tire type (land/air) and to estimate industry's degree of willingness to manufacture a specific tire.
3. Collected/reviewed information using a questionnaire for Goodyear and Michelin with a short suspense due to timeline requirements to better understand the manufacturing environment for tires, why certain tires are considered military unique vs. commercial, and surge flexibility/constraints. This questionnaire focused on the 42 "industrial base" tires, since asking the suppliers to complete a survey on all 383 tire NSNs would be overly burdensome. Additionally, these tires were identified as military unique despite anecdotal evidence to the contrary for land tires, and the questionnaire would provide Goodyear and Michelin an opportunity to respond using FAR 2.101 – definition for "commercial items" as the basis. Furthermore, several of the "industrial base" tires are type C or slow moving tires, and the questionnaire would yield information about the disposition of the molds and other manufacturing equipment when not in use.
4. Interviewed one of the Air Force ESA representatives at Hill AFB to better understand why aircraft tires are considered military unique.
5. Interviewed DSCC's Quality Assurance Specialist to understand the process used to identify "industrial base" items.
6. Analyzed the 35% second source requirement for each contract.
7. Reviewed a GAO report that identified severe shortages for military land tires during OIF.
8. Analyzed 7 Service submitted Other War Reserve Material Requirements (OWRMR) that matched TPI NSNs
9. Identified Type A land tires that matched performance specifications for tactical vehicles under SAE J-2014 to derive preliminary surge and sustainment planning requirements.

1.3.3 Data Sources

BearingPoint Inc. and LATA utilized a number of data sources and data collection techniques to provide analysis and recommendations for each task within the study scope:

- Market research on the U.S. tire manufacturing industry
- Policy analysis for the Trade Agreement Act (TAA) and Buy American Act (BAA)
- Department of Commerce's 2006 Annual Survey of Manufactures data
- Publically available market research from Michelin for select segments of the tire market, including military aircraft

- DORRA requisition data to classify tires by Annual Dollar Value (ADV) and assess demand volatility
- DLIS data to identify active tire manufacturer part numbers for military tire NSNs
- Questionnaire to understand military unique determinations and production capabilities for 42 "Industrial Base" items covered under the second source requirement from Goodyear and Michelin
- Interview with Michelin's Director of Military sales for land tires
- Interviews with DSCC Tire Team and Engineering Support Activity (ESA) representatives from the Tank and Automotive Command (TACOM) and the Air Force
- Critical analysis of 35% second source requirement clauses
- GAO Reports (GAO-05- 275 Defense Logistics)
- TACOM's 2005 Team Tire Catalog for matching NSNs to weapon systems and tire application
- Michelin's Performance Review Board slides for February 2008
- Service submitted Other War Reserve Material Requirements (OWRMR) matching TPI NSNs

1.4 Assumptions

- Awarding a large group of commercially available items is an effective and proven sourcing strategy to either reduce acquisition costs and/or improve customer service levels by leveraging the organization's purchasing power.
- Maximizing purchasing power through the sourcing strategy identified above customarily means one or more suppliers may not receive a requirement from the customer over the life of the contract in order to achieve volume savings through contract compliance.
- FAR 2.101 – Definitions for "Commercial Items" is the proper criteria for determining whether or not an item is military unique or commercial.
- A global tire manufacturer is the appropriate prime contractor to support tire privatization and DoD tire customers for a number of valid reasons, to include having a global supply chain, knowledge of tire obsolescence issues and the tire industry, significant financial resources etc, with adequate Government oversight and firewalls.
- All competitors have equal access to tire demand history and have a strong incentive to compete for the DoD tire contract opportunity available within 5 years.
- Beyond 5 years, the incentive to maintain qualification for approved tires will degrade.
- There are no policy or public law requirements that require the Defense Logistics Agency to maintain a U.S. domestic industrial base for tires, when manufacturing takes place in "qualifying

or designated countries" in accordance with the Buy American Act and Trade Agreements Act , and the Defense Logistics Agency is allowed to procure tires manufactured outside of the United States, namely Canada, Italy, Spain and France, because these countries are World Trade Organization Government Procurement Agreement countries and considered "designated countries".

- Manufacturing in Canada, Italy, Spain and France poses no additional risk to the DoD's mobilization capability because these countries have continued to be U.S. allies and have not restricted military sales to the U.S. in the past during wartime.

SECTION TWO: TASK 1 AND 2 ANALYSIS AND CONCLUSIONS

This section provides an analysis and conclusions for Task 1 (Provide analysis that determines if the domestic industry is viable without DoD demand) and Task 2 (Determine if some of the tires on the TPI contract cannot be sourced domestically and determine the cause(s) for the tires lack of domestic sourcing).

2.1 Task 1: Viability of U.S. Tire Manufacturing Industry

Based on the analysis in the following sections, the domestic industry should remain viable without DoD demand in the event one or more of the following occurs:

- Combat operations decline resulting in a return to a peacetime demand environment,
- A large portion of DoD tire demand is sourced from outside of the U.S. from designated countries, or
- The majority of DoD tire sales are sourced through Michelin rather than Goodyear or other major DoD tire suppliers

2.1.1 Task 1: Analysis

The U.S. tire manufacturing industry consists of about 100 companies that operate 160 plants with combined annual revenue of $13 billion. Demand is driven by sales of new vehicles and replacement tires. The industry is highly concentrated with the top 4 manufacturers (Goodyear, Bridgestone, Michelin, and Cooper) holding more than 75 percent of the market[2]. These companies have global supply chains supporting various international markets and are configured to support international market requirements. Furthermore, 35 plants have annual revenue over $100 million.

Tires are largely a commodity and profitability depends on cost-efficient operations. Manufacturers may specialize by type of vehicle or size of tire, such as for cars, trucks, airplanes, farm equipment, or children's vehicles. They may also specialize by type of tire: pneumatic (inflatable); solid; or semi-pneumatic, and may make tire repair and retreading materials. Small companies can compete by producing tires or tire-related products for niche markets, such as bicycles or farm equipment[3]. Since over 2/3rd of the land tires managed by DSCC are older Bias-ply[4] tires, Michelin can source these tires

[2] Tire Manufacturers, First Research, Inc., May 5, 2008, 10 Pages - Pub ID: FRRS1774144

[3] Ibid

[4] "Bias-ply tires the tread & sidewalls share the same casing plies; All sidewall flexing is transmitted to the tread, resulting in: deformation in the tread contact patch, friction with the ground, rapid wear, reduced traction, and higher fuel consumption" – Source: Michelin North America Inc. (http://www.michelinag.com/agx/en-US/products/advantages/bias_radial/bias_radial.jsp)

from smaller manufacturers, such as [redacted]. Large companies can afford the research to develop tires from new, technologically advanced materials, and can invest in improving production efficiency. For military tires, the large manufacturers focus production primarily on modern radial tires.

Figure 2: Department of Commerce Sales Data on Tires

NAICS	Description	2005	2006	% of Total (2006)	% Change
326211	Tire manufacturing, except retreading	14.386	14.206	100%	-1.3%
3262111	Passenger car pneumatic tires (casings)	7.309	6.896	51%	-5.65%
3262113	Truck and bus (including off-the-highway pneumatic tires)	4.843	5.038	34%	4.01%
3262117	Tractor and implement (farm and industrial) pneumatic tires	0.592	0.598	4%	0.99%
3262119	Industrial and utility pneumatic tires (including garden)	0.238	NA	2%	NA
326211B	Other pneumatic tires/casing incl. motor bike/motorcycle/etc.	0.245	0.246	2%	0.19%
326211D	Solid and semi-pneumatic tires	0.178	0.142	1%	-20.41%
326212	Tire retreading	1.151	1.453	100%	26.33%

As shown in Figure 2, the Department of Commerce's 2006 Annual Survey of Manufactures data shows that total U.S. shipments decreased 1.3% from 2005 to 2006. This decrease was heaviest for the passenger car pneumatic tires (-5.65%) considering its relative size to other tire categories. Solid and semi-pneumatic tires also experienced a significant decrease (-20.41%); however, shipments for all other categories actually increased. Tire manufacturers are increasingly sourcing tires from low cost countries, such as China, Sri Lanka, as cited by several industry announcements to remain competitive, which is likely causing the decrease in U.S. shipments for passenger car and solid/ semi-pneumatic tires categories. Tire retreading has increased significantly and is considered a valuable component of the military tire industrial base, especially for aircraft tires.

DoD demand remains largely insignificant relative to total U.S. shipments for land tires with most of the military sales (Type A tires accounting for 80% of total military land tire demand) coming from the Truck and Bus pneumatic tires NAICS code 3262113. Aircraft tires are included in NAICS code 326211B - Other

pneumatic tires/casing incl. motor bike/ motorcycle/ etc., which is relatively small at 2% of the total U.S. tire shipments.

Without a more exact value for aircraft tires, the team utilized market research from Michelin. Michelin estimates that the world market for military aircraft tires was 23% in 2006, which includes other non-U.S. military sales. Military aircraft tire sales have a larger impact on total sales within the aircraft tire segment than military land tires. However, since the Americas are estimated to be 53% of the aircraft market and military aircraft tires require more advanced manufacturing capabilities, it is unlikely that these tires will be sourced from low cost countries. Likewise, unlike with passenger car tires, there may not be a significant economy of scale due to the relatively low volume for aircraft tires to warrant relocating manufacturing overseas. Finally, aircraft tire supply is currently constrained and has significant barriers to entry, and as a result, the industry is likely maintaining comfortable profit margins.

Tire manufacturers customarily build tires to customer or Original Equipment (OE) specifications, such as Caterpillar or John Deere. Molds are typically developed by the tire manufacturer, and production lines (presses and building machines) are set up to run a batch of tires unless the volume is high enough to run the production line continuously. When the planned batch is completed, the molds are moved into storage, where it is not uncommon to find 1,000s of tire molds. In some cases several years can elapse before a production line is re-initiated, as demonstrated in Goodyear's questionnaire for several aircraft tires. Likewise, the HMMWV Bias-ply tire was re-initiated by Titan after more than 6 years of dormancy.

For land tires, Michelin reported Production Lead Times (PLT) for 6 "industrial base" land tires of [redacted] days. Goodyear reported PLT for the 5 "industrial base" tires manufactured by Goodyear within [redacted] days, which is relatively short, compared to most other DoD items. However, scheduling production contributes the most to volatility and lead times within the total order-to-receipt process time, which includes PLT. For land tires, Michelin requires [redacted] days for 5 of the "industrial base" land tires and [redacted] days for one of the tires to schedule and establish active production. Likewise, Goodyear requires between [redacted] days for 3 NSNs and [redacted] days for 2 NSNs out of the 5 of the "industrial base" land tires. For aircraft tires, Goodyear requires [redacted] days advance notice to schedule production and another [redacted] days to move from a cold base of production to active or warm production. Once production for aircraft tires commences, the PLT is [redacted] days for all aircraft tires produced by Goodyear. Michelin did not submit a questionnaire for aircraft tires.

2.1.2 Task 1 Conclusion

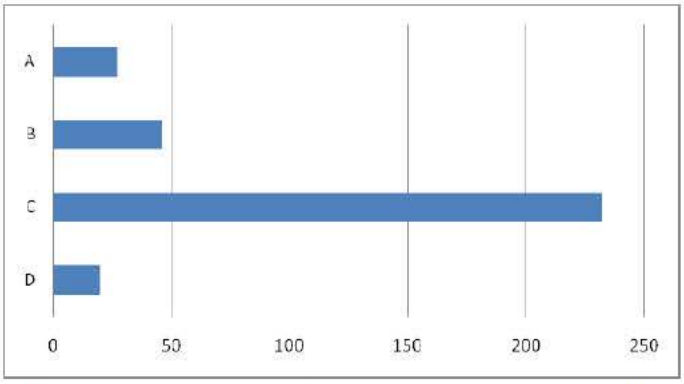
U.S. commercial demand for tires remains strong and much larger in proportion than DoD demand, especially for land tires. Although DoD would be considered one of the largest single customers for tire manufacturers, the loss of a major customer would be disappointing financially over the short term, but is not likely to cause a "tipping point", where the manufacturer will become insolvent or decide to shift domestic manufacturing overseas. As long as Michelin's major competitors have the opportunity to

compete at the end of the base period and a high likelihood of winning, any current loss of DoD sales will not significantly impact tire manufacturing over the long term.

2.2 Task 2: Non-domestically Sourced Tires and Issues (Non-TAA compliant Tires)

In accordance with the Buy American Act and the Trade Agreements Act, Michelin is allowed to source tires from "designated or qualifying" countries. To date 5 out of the 7 land "industrial base" tires are sourced from outside of the U.S. – [redacted] Despite the challenges of managing 232 Type C or "slow moving" tires, as shown in Figure 3, with over 2/3rd of all land tires having older Bias-ply tire construction, Michelin has only had to source [redacted] tires from non-TAA compliant countries. None of these tires has been identified as an "industrial base" tire. Non-domestic sourcing or sourcing from non-TAA compliant countries does not appear to be a problem for aircraft tires.

Figure 3: Count of NIINs by ABC Classification for Land Tires



Although obsolescence is likely a factor in Michelin's outsourcing of [redacted] tires to smaller manufacturers and overall sourcing challenges, the compelling factor is each tire's low Annual Demand Value. Smaller manufacturers, such as Specialty Tires of America, Carlisle and Titan, have demonstrated willingness to manufacturer older [redacted] tires, if they have the molds available and the demand is sufficient. Due to the large number of Type C and Bias-ply tires within the TPI population and an overall trend of sourcing tires from low cost countries, DSCC may find more instances of non-TAA compliant products.

SECTION THREE: TASK 3a AND 3b ANALYSIS AND CONCLUSIONS

This section provides an analysis and conclusions for Task 3a (Determine whether the 35% second source requirement in the TPI contract is sufficient to have the intended effect of maintaining an adequate industrial base) and Task 3b (Determine whether the TPI acquisition is at risk of creating a sole source environment that places DoD at a disadvantage in future procurements).

3.1 Task 3a: Effectiveness of 35% second source requirement in maintaining the industrial base

Based on the analysis in the following sections, the 35% second source requirement in the aircraft tire contract does provide a "safety net" in the event the market changes – Michelin increases capacity for aircraft tires in an attempt to source aircraft tires on the contract internally. The current supply market for military aircraft tires is constrained, requiring Michelin to source from both Goodyear and Bridgestone, so competition will remain healthy, at least for the next few years. Aircraft tires are considered military unique by both the Air Force ESA representatives and as indicated in Goodyear's response to the questionnaire, and the safeguards in the clause should offer effective protection against actions that would limit competition.

As for the effectiveness of the clause for land tires, the objective of "maintaining or increasing competition" is largely met by the commodity-like nature and highly competitive landscape of the land tire industry, rather than the application and effect of the clause. Requiring second sources does in general improves wartime readiness; however, DLA can more directly impact readiness using a compliant Surge & Sustainment Clause with items identified as having a Surge and Sustainment Planning Requirement (SSPR). The clause would apply to all tires, not just those that are military unique and/or sole sourced (Note: sole sourced tires are excluded as "industrial base" tires under the TPI "35% second source" clause). Modifications to the clause would likely yield a different population of "industrial base" tires, although a number of the original tires would remain.

3.1.1 "Establishing or Maintaining Approved Sources"

Each contract has a clause named "Establishing or Maintaining Approved Sources" for tires identified as "industrial base" tires that are ***military unique*** or ***essential in maintaining the industrial base***, have estimated demand quantities ***greater than 2000*** over 5 years, and have ***more than one approved source of supply***. For these "industrial base" tires, Michelin must ensure that 35% of the annual demands are supplied by other approved sources, provided the cost is not excessive or prohibitive or limits Michelin's ability to meet the Logistics Response Time (LRT). The intent of these clauses appears to be two-fold – 1) to preserve production capability for surge and sustainment in the event of a "national emergency" and 2) to increase or maintain competition among approved sources; however, the emphasis appears to be entirely focused on objective 2 with only passing references to "mobilization" requirements.

Developing a clause that seeks to increase or maintain competition among approved sources is challenging, since the list of approved sources is dynamic and changing. Additionally, there are a large number of tires with only one source that is not Michelin, indicating that Michelin will have to source from other manufacturers anyway outside of the scope of the clause. Finally, Michelin or the prime contractor has the incentive to limit the scope of applicable "industrial base" NSNs to the maximum extent possible, especially if they are Type A (Fast moving) tires. A more manageable approach could be to require 35% or a specific target % of the entire forecasted annual demand value for each contract rather than for a subset, similar to a small business target for a prime contractor. This would provide the prime contractor more flexibility to adjust sourcing to meet the target and optimize their product mix based on this constraint. However, this approach would limit the effectiveness of using DoD's buying power to achieve cost reductions and/or improved customer service levels – the higher the shared percentage, the less attractive the solicitation will be to suppliers seeking to prime the contracts.

For the air contract, 35 out of 58 aircraft tires were initially identified in collaboration with DSCC, the Air Force (acting as the ESA), Michelin and Goodyear after the contract was awarded. The application of DSCC's "industrial base" criteria, discussed in the next paragraph, is continuing to be examined and negotiated with Michelin, and the list is in the process of being reduced to ~28. For the land contract, DSCC in collaboration with TACOM identified 7 out of 325 land tires that met these criteria and for the land contract listed them in the RFP, instead of negotiating after the award.

In making "industrial base" qualifications, DSCC identified all tires that had more than one source, including commercial tires, and questioned manufacturers matching these tires on the percentage of DoD production versus commercial. If the manufacturer responded that they had any level of commercial production, e.g. 10% (production intended for commercial customers), then the tire was considered not essential in maintaining the industrial base. DSCC's process in effect casted a wider net over the population of potential manufacturers that might be impacted by the TPI acquisition, and this net would logically include any military unique tires. However, identification of truly military unique tires would have been a more appropriate criterion. Manufacturers of military unique items are more likely to exit the DoD business entirely if they do not realize sufficient sales and are unlikely to re-initiate unique manufacturing capabilities and compete for future DoD contracts. DSCC's process focused more on "increasing and maintaining competition among approved sources, rather than identifying which items were at risk because they were military unique or critical for wartime mobilization. If tires are considered "commercial", then increasing and maintaining competition" is not necessary.

3.1.2 Identification of Military Unique Tires

Based on the questionnaires submitted by both Michelin and Goodyear, all land tires would be considered "commercial items" under FAR2.101 – these tires are of a type customarily used by the general public, have modifications of a type customarily available in the commercial marketplace, or have minor modifications to Federal specifications, not customarily available in the commercial

marketplace. Military land tires fit well within all three criteria. The assertion here is that it's customary for tire manufacturers to move in and out of production for certain tires based on customer requirements and produce tires to customer specifications that include minor modifications to the tire. The modifications to the tires would be considered minor, even for tactical vehicle tires.

As a result, the risk of creating a sole source environment appears to be very low for land tires. Both Goodyear and Michelin differ in their assessment on whether the same tire is military unique or commercial for land tires; therefore, the Government should validate these claims by examining more carefully whether a military tire has minor or major modifications. According to FAR 2.101, minor modifications mean "*modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor*.[5]"

For aircraft tires, the risk appears to be higher because these tires are considered military unique by the Air Force ESA representative, since there are more significant modifications to the design of the tire required to meet military specifications. However, Goodyear reported that the NSNs for three aircraft tires identified as "industrial base" tires were inactive and a commercial substitute is available. As a result, aircraft tires should also be examined according to the criteria above for commercial items. The Original Equipment (OE) manufacturers, e.g. Boeing and Lockheed Martin, largely determine which tires meet the specifications for a particular aircraft. Other tire manufacturers are encouraged to qualify their tires, but the costs are very high (exceeding several million Dollars). Qualified tires are indexed according to its lifecycle cost performance, i.e. tires that have a higher lifecycle cost may wear out more frequently requiring more frequent maintenance actions, so the manufacturer may have to reduce its unit price to remain competitive. The Air Force, serving as the ESA, considers all 58 of the aircraft tires in the TPI population as military unique. Additionally, the manufacturers bear the cost of maintaining approved part numbers that meet DoD requirements, and this becomes less attractive when there are no sales for the tire.

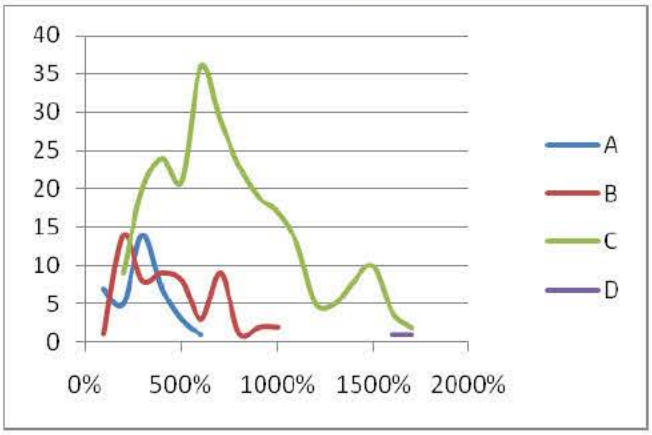
3.1.3 Surge and Sustainment Planning Requirements

The contracts do not identify surge and sustainment planning requirements by NSN, as found in a compliant DLA surge clause, but instead require the prime contractor to plan for demand surges within the range of 2X normal demand from the most recent similar period. The prime contractor is required to maintain the Logistics Response Time (LRT) for any level of customer demand including surge demand. In periods of surge demand, the contracts slightly relax the required LRT for CONUS and

[5] FAR -- Part 2: Definitions of Words and Terms, Subpart 2.1 – Definitions; http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/02.htm

OCONUS destinations, but maintain the LRT for War/ Conflict support destinations. Due to the high number of Type C tires on the land contract and high level of demand volatility as measured by the standard deviation of daily demand as a percentage of the average daily demand, the contracts place a challenging requirement on the prime contractor. The higher the volatility of demand, the larger the supplier's investment in safety stock, and in the event of a major theater war, customer service levels will degrade significantly. Figure 4 shows the volatility of daily demand for the past year compared to average demand by inventory classification. Type A items generally have the lowest volatility and predictability, but Type B and C have much higher volatility.

Figure 4: Volatility of Daily Demand by ABC



The prime contractor is also not required to provide a Capability Assessment Plan (CAP), which provides DLA critical information on the supplier's capability to support wartime requirements. Often this involves collecting supply chain information on the supplier's production capability and its critical suppliers. Due to the highly proprietary nature of this information, the Government should retain management of this process or utilize an independent contractor, and the prime contractor should not be put into a position of requesting proprietary information from a competitor and vice versa. In fact, surge and sustainment planning was not listed as a responsibility that was privatized under the TPI, nor should the prime contractor be expected to shoulder this additional, but critically important business process. DSCC has an industrial specialist team that can support both contracts; however, since a compliant surge and sustainment clause was not inserted in the contracts, DSCC can only ask for cooperation from Michelin. Michelin may be willing to replace the current 2X surge planning requirement in exchange for more specific surge and sustainment planning requirements for a narrower scope of tires, but they will be very sensitive if this leads to an increase in sharing requirements.

In Figure 5, 7 tires were identified by the Services with Surge & Sustainment Planning Requirements for 2008. A quick glance at the weapon systems, shows representation for a number of Army rotary wing and vertical take-off/landing aircraft, but fixed wing aircraft and a number of tactical land vehicles are noticeably missing. For example, the High Mobility Multi Wheeled Vehicle (HMMWV) is not included in the Army's submission.

Figure 5: 2008 Service Submitted Other War Reserve Material Requirements (OWRMR)

NIIN	*Surge & Sustainment Planning Requirements*	*Annual Demand Value Class*	*Average Demand*	*Weapon Systems*

	(monthly rate)			
013078527	24	C	30	Over the Road L/T Tire
002697553	48	C	0	AH-1; OH-58, UH-1
009385964	42	C	120	CH/MH-53 V-22A, CH/MH-47
011015087	47	B	60	UH-60, HH-53
011373398	72	B	90	UH-60, HH-53
011634647	17	C	60	AH-64
011680164	26	B	120	AH-64

In 2005, the Government Accountability Office (GAO) published a report on critical shortages of tires for the HMMWV and 5-ton trucks during Operation Iraqi Freedom (OIF), negatively impacting the mission. For the 5-ton truck, demand increased fourfold from 1,189 tires in April 2002 to a wartime level of 4,800 tires in April 2003. For HMMWV tires, worldwide demand increased more than fourfold, from a peacetime rate of 3,251 tires per month in June 2002 to 15,224 tires per month in June 2003. For both tires, inventory levels were insufficient to meet customer needs. Figure 6 shows the extent to which OIF peak wartime demand exceeds current demand, as shown in red, for these tires that match these tactical vehicles.

Figure 6: HMMWV and 5-Ton Truck Tires with Critical Shortages during OIF

NIIN	*GAO Peacetime (Monthly)*	*GAO Wartime (Monthly)*	*"IB" Item*	*ABC Class*	*Current Demand (Monthly)*	*OIF Exceeding Current*	*Weapon Systems*
013337632				A	3619		HMMWV (GY)
015414090			Y	A	1197		HMMWV (GY/MX)
011714746				A	434		HMMWV (Bias)
Total	3,251	15,224			5249	**9,975 (2.9X)**	
012141344	1,189	4,800	Y	A	989	**3,811 (4.9X)**	5-Ton (M923, M926, M930, M935)

The GAO report demonstrates that the current surge planning rate (2X) on these contracts could easily be exceeded during wartime. In lieu of complete and accurate Service submitted surge and sustainment planning requirements, DSCC may consider developing requirements for tactical land vehicle tires. Since DLA does not have access to most of the historical demand/ requisition data for tires as a result of the recent Consumable Item Transfer (CIT) and tire privatization, DSCC would need to request such data from the Services (previous item managers). The manufacturers may also be able to provide demand data that can be used to develop the peacetime rates and wartime peak demand for each tire or at a

minimum provide an alternative perspective to assess accuracy. Nevertheless, GAO was able to portray the supply situation, and it seems reasonable that DSCC could do the same. Finally, the Services should be encouraged to improve the accuracy of their wartime forecasting models and should be questioned when historical wartime demands differ greatly from Service models. Often there are valid reasons, such as the weapon system is being phased out or sufficient War Reserve Material (WRM) has been stockpiled. The objective should be to improve collaboration and focus attention on continuous analysis of Surge and Sustainment Planning Requirements to improve understanding of wartime supply risks.

Figure 7 identifies 11 additional land tires that meet the SAE J-2014 performance specification for tactical vehicle tires and are also currently in relatively high demand during this period of high OPTEMP as a result of the ongoing combat operations in Iraq and Afghanistan. The NIINs in red match the tire types identified in the GAO report with critical shortages during OIF. By utilizing the GAO data for the HMMWV and 5-Ton truck tires and planning for a 2X peacetime demand rate for these additional 11 tires, DSCC would be in a better position to respond to another wartime surge event or at a minimum understand the degree of risk. Additionally, these new surge and sustainment planning requirements could be used to justify adding the tire to the list of "industrial base" tires in accordance with the criteria of "essential in maintaining the industrial base" for a "national emergency". Additionally, Figure 7 shows the baseline shared value increase for military land tires from $11,320,304, which is the estimated current 35% minimum share requirement[6], to $45,000,003. Michelin will not likely agree to a $23,976,581 increase in sharing requirements.

Figure 7: TPI land Tires with SAE J-2014 performance specifications for Tactical Vehicle Tires

NIIN	Current Demand (Monthly)	"IB" Item	ABC Class	Manufacturers	% Shared	Share Value	Weapon Systems
002628653	450		$1,673,444	Titan	100%	$1,673,444	M127A1C, M820A2 , M131A1C
002628677	701		$1,515,280	Titan	100%	$1,515,280	HTD-A-67, M146C, M185A3, M395
011714746	434		$2,683,856	GY	100%	$2,683,856	M1025, M1042
012141344	989	Y	$6,623,104	GY, MX	35%	$2,318,086	M923, M926, M930, M935
013116853	97		$978,294	GY, MX, CONT	35%	$342,403	AF R11 REFUELER
013234813	476		$2,239,109	MX	0%	$0	M1000
013251934	165	Y	$2,272,381	GY, MX	35%	$795,333	5157B, 5230B

[6] Based on estimated ADV and the minimum 35% share requirement imposed on the 7 "industrial base" land tires, provided the cost is not excessive or prohibitive or limits the contractor's ability to meet the Logistics Response Time (LRT), in which case the contractor is allowed to deviate from this requirement for up to one year.

013342694	544	Y	$6,164,970	GY, MX	35%	$2,157,740	M1070
013569098	398	Y	$10,389,161	GY, MX	35%	$3,636,206	M1078, M1096
013976976	85		$1,175,565	MX	0%	$0	M35A3
014363332	55		$1,022,336	MX	0%	$0	M917A1/E1 (front axle only)
014363334	267		$2,657,880	MX	0%	$0	M917A1/E1 (rear axle)
014733997	219		$1,243,221	GY	100%	$1,243,221	5 TON BASIC W/ABS
Subtotal			**$40,638,601**				
013337632	3619		$26,507,976		100%	$26,507,976	HMMWV (GY)
015414090	434		$6,075,594		35%	$2,126,458	HMMWV (GY/MX)
Subtotal			**$32,583,570**				
Total			**$73,222,171**			**$45,000,003**	

Earlier it was mentioned that the 35% second source requirement was intended to meet two objectives – 1) to preserving production capability for surge and sustainment in the event of a "national emergency" and 2) to increasing or maintaining competition among approved sources into the two separate clauses respectively. DSCC could consider modifying both contracts to include a compliant Surge and Sustainment clause, covering any tire with a SSPR, including commercial and sole source, to achieve and enhance objective 1, and maintain the current 35% second source requirement for truly military unique tires that have more than one source and a minimum level of demand to achieve objective 2.

As required under the Surge and Sustainment clause, the prime contractor would submit a Capability Assessment Plan (CAP) on its capability to meet Surge and Sustainment Planning Requirements (SSPR) for all of the tires that it manufactures internally. For all other tire manufacturers that are listed as a source of supply with a SSPR, DSCC should request that they provide a CAP to the Government or an independent contractor. Based on an analysis that compares surge and sustainment requirements to supply chain capabilities and identifies shortfalls, DSCC may seek to qualify and add a tire under the 35% second source requirement based on the criterion of "essential in maintaining the industrial base" in order to maintain a warm capability. Otherwise, standard DLA Industrial Preparedness Measures (IPMs) could be pursued, such as an Industrial Base Maintenance Contract (IBMC) or a Minimum Sustainment Rate (MSR) contracts. An IBMC could involve covering the costs of maintaining unique production equipment, e.g. molds, presses and also maintaining qualified tires. Regardless, the CAPs must first be analyzed before the best option can be identified to maintain a wartime capability.

3.1.4 Task 3a: Conclusion

The 35% second source requirement appears to be more effective for aircraft tires than land tires; however, the process for identifying "industrial base" tires should focus more on whether or not a tire is

military unique as defined in FAR2.101 – Definitions, rather than "increasing or maintaining competition". Since military land tires fit well within the definition of "commercial items", sharing requirements may not be necessary to maintain competition in an industry that is already very competitive. Surge and Sustainment Planning Requirements should be developed and incorporated into both contracts using a standard DLA Surge and Sustainment clauses.

3.2 Task 3b: Risk of Creating a Sole Source Environment for Military Tires

Based on the analysis in the following sections, the Department of Defense is not at risk of creating a sole source environment for military tires during the base period of the contract.

3.2.1 Task 3b: Analysis

Military land tires would be considered "commercial items" and an excellent market basket of items for strategic sourcing – awarding a large group of items to one supplier to reduce acquisition costs and/or improve customer service levels by leveraging DoD's purchasing power. Awarding a significant amount of DoD supply requirements to one supplier customarily means one or more other suppliers may not receive any DoD business over the life of the contract.

Other major tire customers have utilized similar sourcing strategies in the past. For example, the United States Postal Service (USPS) awarded a contract to Goodyear in July 2001 to become the exclusive supplier and supply all of the federal agency's tire needs for the next 10 years. The Postal Service was expected to purchase approximately 235,000 Goodyear tires each year to outfit its fleet of more than 200,000 trucks, vans, and delivery vehicles. Under this agreement, USPS consolidated requirements from three tire manufacturers to Goodyear[7]. Moreover, in 1999, Federal Express Corp. (FedEx) expanded Goodyear's contract to serve as the tire supplier for its truck and airport ground support equipment in the U.S. and international locations. Under the terms of the contract, Goodyear committed to supply up to 100 percent of FedEx's original equipment, replacement and retreaded tire needs for FedEx's airport and ground support equipment and vehicles[8]. Lastly, at the OEM level, the same strategic sourcing strategies are used. For example, Oshkosh sources tires almost exclusively from Michelin, while others buy exclusively from Goodyear[9].

Tire manufacturers customarily move specific tires in and out of active production based on scheduling and demand requirements. When not in use, unique production equipment, such as molds, are placed

[7] USPS News: Press Releases, July 25, 2001, Release No. 01-070, *Postal Service Awards 10-year Tire Contract To Goodyear*, www.usps.com/news/2001/press/pr01_070.htm

[8] BNET Business Network, Transportation Industry, *Goodyear and FedEx renew tire supply contract*, Fleet Equipment, March 1999

[9] Michelin North America.

into storage. There is very little chance that Michelin's competitors would not be willing to re-establish production for tires previously discontinued in order to compete for a future award, as long as there is significant prospective sales volume.

For military aircraft tires, Michelin will have to source from both Goodyear and Bridgestone to support DoD requirements because the industry has constrained production capacity for Goodyear, Michelin, and Bridgestone. The aircraft tire market is very healthy, and the 35% second source requirement provides a reasonable "safety net" against any potential anti-competitive efforts from Michelin.

Figure 8 provides a count of tire NIINs by tire manufacturer that have one source or greater than one source by ABC inventory classification that were purchased in the past by DoD. It shows that Michelin would have to source a number of TPI land tires from other manufacturers, since they are sole source. A number of low ADV NSNs did not match to an active tire manufacturer, but rather to an Original Equipment (OE) entity, e.g. industrial/construction forklift manufacturers, such as Case Construction Equipment. Clearly, Michelin and Goodyear have the largest number of approved part numbers matching the current population of TPI NSNs. Goodyear is the ideal competitor for Michelin and has the supply chain capability to perform all of the business processes privatized under BRAC 2005. A teaming arrangement between Goodyear, Bridgestone, and Titan would be a significant challenge to Michelin in any future military tire long term acquisitions as shown at the bottom of Figure 8.

Figure 8: Count of Sole Source Land Tires and >1 Source Land Tires by Tire Manufacturer

Manufacturer & Qualified Part Numbers	*Sole Source Land Tires*					*>1 Source Land Tires*				
	A	*B*	*C*	*D*	*Total*	*A*	*B*	*C*	*D*	*Total*
Michelin (Global)	9	5	15	0	**29**	4	9	4	1	**18**
Goodyear (Global)	4	5	31	0	**40**	4	14	14	0	**32**
Bridgestone (Global)	2	1	11	0	**14**	2	8	6	1	**17**
Titan (Niche)	2	0	10	0	**12**	0	1	7	0	**8**
Denman (Niche)	0	1	6	0	**7**	0	1	0	0	**1**
Continental (Global)	0	1	2	0	**3**	1	2	1	0	**4**
Specialty Tires of America (STA) (Niche)	0	0	3	0	**3**	0	1	0	0	**1**
Cooper Tires (Global)	0	0	1	0	**1**	0	1	0	0	**1**
Competitor Team (GY, Bridgestone, Titan)	8	6	52	0	**64**	6	23	27	1	**57**

Despite the relatively low risks, DLA has a responsibility to provide contract oversight and to help shape the competitive environment for military tires by ensuring competitors have a strong incentive to participate in future acquisitions for military tires. One incentive would be to shorten the contract

lifecycle – re-competing the contract at the end of the base period. If all option years are awarded, competitors would have to wait a total of 10 years and may not aggressively seek qualification of new tires. This decision should be made public and announced to the industry at the next DSCC supplier conference. A 5 year contract with a 3 year base and 2 option years would strengthen the competitive environment.

3.2.2 Task 3b: Conclusion

The Department of Defense is not at risk of creating a sole source environment for military tires as a result of the TPI contracts. The 35% second source requirement provides a "safety net" for maintaining an already healthy aircraft tire industry. However, DLA should consider strengthening the competitive environment by decreasing the contract lifecycle and re-competing the contract at the end of the base period and utilizing a standard DLA 5 year contract vehicle.

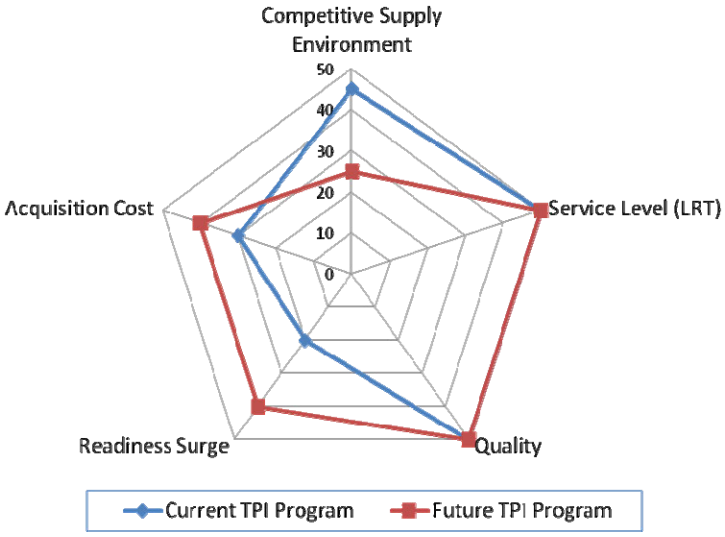
SECTION FOUR: RECOMMENDATIONS

This section provides recommendations for Task 4 (Provide recommendations for what measures DLA should consider for maintaining the capability and capacity required for tires by the industrial base).

4.1 Modifying TPI Acquisition Objectives

To the extent possible within the confines of the current contracts with Michelin, DLA should adjust the overall acquisition objectives of the TPI program. In Figure 9, the team developed a notional radar diagram to qualitatively depict the relative value of various TPI acquisition objectives. The blue lines show the relative value of each of the current TPI acquisition objectives, and the red lines show new focus areas on *reducing acquisition costs* and *improving readiness/surge* and a de-emphasis on *shaping the competitive environment*. For the most part these acquisition objectives oppose one another. For example, traditionally improving service levels increases the acquisition costs, assuming quality must be maintained.

Figure 9: TPI Acquisition Objective Radar Diagram



By limiting the effect of contract provisions that increase industrial base sharing requirements, more purchasing power can be leveraged towards reducing acquisition costs. Furthermore, this type of acquisition becomes more attractive to both Michelin and Goodyear. By adding surge and sustainment provisions in the contract, military readiness increases, but this may require some requirements be shared with other manufacturers, reducing purchasing power.

4.2 Recommendations

1. *Develop Surge & Sustainment Planning Requirements for both land and aircraft tires.* Since DLA does not have access to most of the historical demand/ requisition data for tires as a result of the recent Consumable Item Transfer (CIT) and tire privatization, DSCC should request such data from the Services (previous item managers). The manufacturers may also be able to provide demand data that can be used to develop the peacetime rates and wartime peak demand for each tire or at a minimum provide an alternative perspective to assess accuracy. Finally, DSCC should encourage the Services to improve the accuracy of their wartime forecasting models and should be questioned when historical wartime demands differ greatly from Service models. The objective should be to improve collaboration and focus attention on continuous analysis of

Surge and Sustainment Planning Requirements to improve understanding of wartime supply risks.

2. *Request that the prime contractor submit a Capability Assessment Plan (CAP) on its internal capability to meet Surge and Sustainment Planning Requirements (SSPR) and request other sources of supply for these tires to do the same.* DSCC could consider modifying both contracts to include a compliant Surge and Sustainment clause, covering any tire with a SSPR, including commercial and sole source, to achieve and enhance objective 1, and maintain the current 35% second source requirement for truly military unique tires that have more than one source and a minimum level of demand to achieve objective 2. Based on an analysis that compares surge and sustainment requirements to supply chain capabilities and identifies shortfalls, DSCC may seek to qualify and add a tire under the 35% second source requirement based on the criterion of "essential in maintaining the industrial base" in order to maintain a warm capability or purse other options to preserve wartime capability.
3. *Re-compete both contracts at the end of the base year period.* Develop a new acquisition program timeline to coincide with the current contract base period end dates and announce intent to re-compete both contracts at the next DSCC supplier conference. The new acquisition plans should better address the modified objectives in Figure 9.
4. *Utilize FAR 2.101 definition for "commercial items" as the basis for making "industrial base" determinations on whether or not the tire is military unique.* Additionally, the criterion of "essential in maintaining the industrial base" should be viewed from a mobilization base perspective rather than on whether or not the item is considered commercial or military unique, but only produced for DoD customers. Collaborate with Michelin on this new interpretation and actions required to modify objectives.

APPENDIX A: DLA QUESTIONNAIRE FOR MILITARY UNIQUE TIRES

Purpose: This questionnaire is intended to collect industrial capability information on tires identified by the Defense Logistics Agency (DLA) as military unique for the sole purpose of gauging the adequacy of the U.S. industrial base to meet defense requirements in accordance with applicable laws and regulations.

Note to Participant: Participation is voluntary. The responses to the questionnaire in no way bind your firm to the Government in any legal contractual relationship, nor is the Government obligated to contract with your firm if procurement of the items specified herein is required. It is understood that access to this data will be limited to duly accredited officials of the Department of Defense, including contractor support personnel, who are subject to penalties for unlawful disclosure. The protection given to data relating to your facility under the espionage act and other statutes will confine accessibility within the Government to those responsible for the defense of the United States. All responses will be marked and treated as "FOR OFFICIAL USE ONLY – BUSINESS SENSITIVE AND PROPRIETARY INFORMATION"

Issue Date: Friday, May 2nd, 2008

Submission Date: Friday, May 9th , 2008

Instructions: Attached is an Excel spreadsheet with NIINs identified by DLA as military unique along with part numbers that we have identified as matching each NIIN from your firm or another entity owned by your firm for reference purposes. Please indicate whether or not the part number(s) is obsolete or inactive by exception. If more than one part number for the same NSN/NIIN yields a different response to one or more of the questionnaire dimensions, please mark the different responses by exception. Otherwise, please complete the questionnaire on a NIIN by NIIN basis. 15 specific questionnaire dimensions or questions have been identified. Please provide your best estimates given the limited time constraints from the Government. For questionnaire dimension #16, please provide any additional comments that you feel will help DLA understand the industrial capabilities that exist for this tire or are at risk; if the comment expands on a specific questionnaire dimension (#1-15), please cite the number.

#	Dimension	Description/ Criteria
1	Military Unique Reason	These tires have been identified by the Government as likely being military unique. If this is "true" for this tire, please identify the applicable "commercial item" criterion (1, 2, or 3) that the tire fails to meet. If this is "false", please provide a comment in questionnaire dimension #16 (Comments) and the applicable "commercial item" criterion below.

		1 – Tire is customarily used by the general public for purposes other than governmental purposes, and has been sold or offered for sale to the general public; or 2 – Tire has modifications of a type customarily available in the commercial marketplace; or 3 – Tire has minor modifications of a type customarily available in the commercial marketplace made to meet Federal Government requirements. Minor modifications mean modifications that do not significantly alter the nongovernmental function or essential physical characteristics of the tire or tire component or change the purpose of a tire manufacturing process. *[Example: Answer is "3": Tire is considered not "commercial" because it has major modifications to Government specifications, even though it's customary for customers to request minor modifications]*
2	**Inventory Classification**	Please identify the relative importance of this tire to your company's annual sales for this class/application, e.g. Agriculture or Construction, using an ABC classification analysis. Estimations will be sufficient. A – Tire is classified in a group of other tires that together would account for >=80% of your company's annual tire sales for this tire class/application. To determine the correct % of sales, the numerator would be the group of "fast movers" and the denominator would be the total sales for this class/application e.g. Agriculture or Construction B – Tire is classified in a group of other tires that together would account for the next 15% of your company's annual tire sales for this tire class/application. To determine the correct % of sales, the numerator would be the group of "moderate movers" and the denominator would be the total sales for this class/application e.g. Agriculture or Construction C – Tire is classified in a group of other tires that together would account for the remaining 5% of your company's annual tire sales for this tire class/application. To determine the correct % of sales, the numerator would be the group of "slow movers" and the denominator would be the total sales for this class/application e.g. Agriculture or Construction D – Tire has zero usage in the past 12 months
3	**DoD Production for last 3 years**	What was your company's internal production output for DoD for this tire over the last 3 years, e.g. 980 – 2005; 960 – 2006; 830 – 2007

4	**Estimated Production for 2008**	What is your company's estimated or forecasted internal production output for DoD for this item for 2008?
5	**Continuous or Batch production?**	Identify whether or not planned production over the next year is going to be continuous or periodic for this tire? [Continuous or Batch]
6	**Estimated # of planned campaigns over the next year?**	Identify the estimated number of tire campaigns (production runs) per year for this specific tire, if production is not continuous
7	**# of tire molds available**	How many tire molds do you maintain for this tire, are active during production, and who owns them, e.g. 5/5/Michelin?
8	**Disposition of production equipment**	When not in production, what is the disposition of the production equipment that is unique to this item by equipment type, e.g. tire mold - storage?
9	**Cold-to-Warm base Lead Time [Not active/ cold base] (Days)**	When not in active production, what is the estimated lead time to establish the production line?
10	**Production Lead Time (Days)**	When in active/warm production, what is the estimated time to manufacture this tire from raw materials to finished tire?
11	**Production Location(s)**	In what location(s) does the majority (>50% of $ value added tire content) of tire manufacturing take place for this tire?
12	**Surge Flexibility (days)**	How many days does it take to expand active production by 20% without impacting other tire production/sales?
13	**Surge Constraints**	Identify the major constraint(s) limiting the company's ability to quickly expand active production by impact type, e.g. Molds – High; Skilled labor – High; Component parts – Medium, in order to meet DoD surge requirements
14	**Production Location(s) (During a surge event, if applicable)**	If applicable, what other location(s) has or have been planned to expand production in the event of a large surge in demand?

15	**Obsolescence**	Have any obsolescence issues been identified for this tire? If "Yes", what is the nature of the issue and how does it impact production?
16	**Additional Comments**	Please provide any additional comments that you feel will help us understand the risks related to our Nation's readiness for this specific tire; If the comment expands on a questionnaire dimension, please cite the number.